quartz ones, while officers of the second and third rank wear gold ones. These buttons are secured to the customary band made of hair and not of velvet.

The reason given for leaving the wife at home — namely, that her clothes would not have stood the wear of the journey — was a polite excuse only. Social custom would have rendered it impossible for any of them to bring their wives with them.

In regard to the extraordinary crystals, my informant's brother has seen the region where they occur, and says the wonders of it are beyond description. He describes it as bordering the shore for a distance, in one measurement, of fifteen miles.

Mr. Kunz is quite right in regarding them as crystals of quartz; for Mr. Yu says they are white, and also like glass, and assume branching forms like trees, columns, etc., and tower at greater heights even than the dimensions given by Mr. Kunz. This region is on the eastern coast of Korea, and has never been visited by foreigners. The Chinese have in vain tried to get permission to visit this place.

EDWARD S. MORSE.

A COMPARATIVE STUDY OF THE ASSOCIATIONS.

To us on this side of the Atlantic, the opportunity to profit by the contrast of the two association meetings just closed ought not to be lost; and the desire to take advantage of it may justify a somewhat extended comparison of the two associations.

Concerning what may be called the 'physical features' of the two meetings, their relation to each other may be readily seen by an inspection of the following statistics: At the Montreal meeting, the total registered attendance was 1,773, of which nearly half crossed the ocean, and about six hundred were classed as 'old' members. The total number registered was somewhat below the average of the past ten years, which was 1,889, not including last year's meeting. The largest meeting ever held by the British association was at Manchester, in 1861, when the registry was 3,944; the smallest, in recent years, at Swansea, in 1880, the number being 899. The number of registered members at Philadelphia was 1,261, the greatest number ever on the rolls of the American association at one meeting. It is not unlikely that the excess of more than five hundred in the membership of the British association over that of the American is to be partially attributed to the rule of the British association, which confines the privileges of attendance to members of one class or another; while the policy of the American association has been to invite and to welcome all who are interested in the proceedings, regardless of membership.

At the Montreal meeting, the total number of papers read was 327. At Philadelphia, 304 papers were read. The number of papers on mathematical and physical science was ten greater in the American than in the British association. In the latter, however, the number of physical papers was greatly in excess, as those concerning pure mathematics were disposed of by a sub-section in a single day.

In addition to the regular papers, there were, in the various sections of the British association, more than fifty reports presented, coming from committees appointed at previous meetings for the consideration of special subjects. Of similar reports in the American association, it can hardly be said that there were any, such as were offered being mostly confined to a few words declaring 'progress,' asking for continuation, and promising something in the future; and even this much was only obtained after much labor on the part of the presiding officer.

As to the general character of the meetings, it may be said that both were above the average. Sir William Thomson declared, at the closing session of the British association, that it was one of the most satisfactory ever held; and both he and Lord Rayleigh declared that the meetings of section A were far above the average.

It can be affirmed without boasting, that Americans (citizens of the United States) contributed in no small degree to insure this success. At least forty, or about one-eighth, of the entire number of papers read, came from them. They joined in several of the important discussions, and generally with credit; and some of them — Newcomb, Rowland, and possibly others — presided over sections at various times. It is well worthy of note, that, of the five papers recommended to be published *in extenso*, one was from Professor Gray, and another from Professor Thurston.

The Philadelphia meeting of the American

association was doubtless, all things considered, the most successful yet held. The work done in sections was, in general, of a higher order than usual; and we are, in turn, indebted to the visiting members of the British association for valuable assistance in 'bringing up the average.' Many of them presented papers, and took part in the discussions which now and then arose in various sections.

The greatly inferior quantity, if not quality, of the work done by our special committees, is unquestionably due, to a great extent, to a fact already referred to in these pages. The committees of the British association are aided by grants of money, as much as $7,500 being allowed at the Montreal meeting. Could the committees of our association obtain such grants, their work would undoubtedly be vastly more satisfactory. Besides, being thus relieved from the purely mechanical drudgery of the work, the feeling of responsibility would be much greater, and each committee would recognize the necessity of justifying its existence, and of showing that the money given as aid had been well invested.

On the whole, it will be admitted that the British association does its work upon a higher plane than that occupied by the American. Its sectional work shows more that is really new and of lasting value, and less that is trifling; although there has been a steady and healthful improvement in the character of the American association during several years past. It may be well to remark here, that there are at least a few of the ablest and best men in American science who have continued to exhibit no interest in the American association; and that, if the association is not precisely what they believe it ought to be, the fault lies at their own doors. No others should or could be so influential in shaping its course and moulding its character.

It may be well, however, to turn from the consideration of these graver differences between the two associations, and notice briefly some of those distinctions which are more personal in their nature, between the members themselves.

Our English cousins certainly possess an enviable capacity for recognizing the amusing side of affairs. At Montreal one came to expect pleasant little outputs of the mildest humor in the midst of the profoundest scientific dissertations. Your formula might be torn to shreds by severe criticism, but your fun was welcomed without examination.

In the matter of paying compliments, and moving thanks in an easy and graceful manner, our English cousins have the advantage of us. It is the almost universal custom for the chairman of the section to thank the reader of a paper, and often in elaborate terms. This consumes a good deal of time, and it is a question whether such wholesale compliment is desirable. It was observed, however, that the distinguished and genial presiding officer of one of the sections made use of two quite different formulae for expressing his appreciation of the merits of the paper: in one case hoping "that the section would join him in thanking Professor —— for his interesting and important communication upon this subject;" and in another, "that the section would join him in thanking Professor —— for his communication upon this interesting and important subject." The importance of the proper arrangement of words was never shown to better advantage.

The undemonstrative character of the American as compared with the Englishman was exhibited in the public meetings of the two associations. The American association has seldom had so felicitous an address from a retiring president as that of Professor Young, and the probability that it was not generally heard throughout the vast academy of music was the only excuse for the fact that its many good points failed of that recognition which they so richly deserved. This failure was commented upon by an Englishman in a remark to the writer, that such an address would have been much more frequently applauded in England. "We constantly interrupt a speaker to applaud him," he said, "if for no other reason than to afford him a breathing-spell."